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shaped. This embodiment enables a simple and direct transmission of the reciprocatory oscillating movement to a device or load to be driven. It does not require a transmission gear as in the case of an electric motor. Thus, a vibrating shaving head can be driven directly. This provides an efficient and low-maintenance drive. Moreover, it enables the oscillation properties of the actuator to be varied easily. The coil is secured to one end of the swing arm, the load to be driven being secured to the other end. The torque of the actuator and the oscillation frequency of the actuator can be influenced in accordance with the ratio between the distances of the coil and the load to be driven from the pivot.

In still another embodiment, the swing arm, which is supported on a pivot, is preloaded with respect to a housing by means of a torsion spring. In a further embodiment, the swing arm is preloaded with respect to a housing by means of at least one blade spring. These embodiments define a possibility of how to cause the swing arm to return automatically to the center position upon excursions to either side. For this purpose, a torsion spring may be arranged around the pivot, which spring has one end connected to the swing arm and its other end to the housing of the actuator. This provides a permanent return force for the excursions of the swing arm. Alternatively, the swing arm may be preloaded by means of two lateral blade springs, which are preferably secured to the load. Thus, it is possible to attain a higher preload than with the torsion spring but the construction is slightly more complicated.

In yet another embodiment, at least a second pivot is arranged at the outer side of the sector-shaped permanent magnets. At least one pivotal joint is present, which pivotal joint couples a first swing arm supported on the first pivot and a second swing arm supported on the second pivot in a pivotable manner and so as to be slidable with respect to one another. The pivots are secured to a housing. This embodiment enables larger amplitudes of the swing arm to

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be obtained, without more room being required by the arrangement. For this purpose, the sector-shaped magnetic circuit is arranged so as to be 180° rotated with respect to the load or device to be driven, as a result of which the load is now disposed at the outside of the sector. In addition, the swing arm is divided into two parts, each of the two parts being mounted on a pivot. The two swing arm parts being linked via a pivot, which in addition is arranged so as to be movable in a longitudinal direction in at least one of the swing arm parts.

In yet a further embodiment the pivot is replaced with a point of attachment to a housing, where the swing arm is attached by means of a blade spring. This embodiment provides an alternative to mounting of the swing arm with the coil by means of pivots. In the present case the swing arm consists at least partly of a blade spring, which can be deflected by the coil secured to one of its ends. Such an arrangement does not have any rotatable parts and can be manufactured particularly cost-effectively.

In yet a still further embodiment, the bounding surfaces of the cage, which originally extend parallel to the plane of oscillation of the coil, taper towards the side that is remote from the pivot, and the bounding surfaces of the coil and the magnets are adapted accordingly. Advantageously, at its side that is remote from the pivot, the cage may have a shielding wall having an opening in the area of the magnets. These embodiments provide a further reduction of the basically low electromagnetic emission by the coil, through which an alternating current flows, and the magnetic stray field of the permanent magnets. Thus, it is also possible to adhere to more stringent future limits without any problems.

In yet still another further embodiment makes the embodiments listed above are made suitable for use in an electric shaver, which enables said shaver to be of a particularly cheap and robust construction.